

REMARKS

Claims 50-61, 63 and 65-67 are pending in this application, claims 66 and 67 having been withdrawn from consideration. By this Amendment, claims 50-61, 63 and 65 are amended and claims 62 and 64 are cancelled. Support for the amendments to claims 50-61, 63 and 65 can be found, for example, in the instant specification at page 1, lines 5 to 8, page 4, line 25 to page 5, line 8 and page 12, lines 16 to 24 and in original claims 50-61, 63 and 65. No new matter is added. In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

Double Patenting

A. Aoki 650

The Office Action rejects claims 50-65 under the judicially created doctrine of obviousness-type double patenting over claims 1-9 of U.S. Patent No. 6,573,650 to Aoki et al. Applicants respectfully submit that the Terminal Disclaimer filed herewith obviates the double patenting rejection. Accordingly, withdrawal of the rejection is respectfully requested.

B. Aoki 047

The Office Action rejects claims 50-65 under the judicially created doctrine of obviousness-type double patenting over claims 1-3, 6 and 9-14 of U.S. Patent No. 6,650,047 to Aoki et al. Applicants respectfully submit that the Terminal Disclaimer filed herewith obviates the double patenting rejection. Accordingly, withdrawal of the rejection is respectfully requested.

Rejections Under 35 U.S.C. §102

A. Kimura

The Office Action rejects claims 50-55 under 35 U.S.C. §102(e) over U.S. Patent No. 6,228,480 to Kimura et al. ("Kimura"). Applicants respectfully traverse the rejection.

Claim 50 recites "[a]n electroluminescent device comprising a wettability changing layer, wherein: the wettability changing layer has a thickness of 50 to 2,000 angstroms; the wettability changing layer is capable of charge-injection and/or charge-transfer; when light energy is applied to a first portion of the wettability changing layer, a wettability of the first portion changes; and when the wettability of the first portion is changed, a further material can be formed pattern-wise on the wettability layer." Kimura does not teach or suggest such an electroluminescent device.

The Office Action asserts that Kimura discloses a wettability changing layer including a photocatalyst. The Office Action further asserts that a layer having a capability of charge-injection or charge transfer would not be different from the layer disclosed in Kimura. Notwithstanding these assertions, Kimura does not anticipate and would not have rendered obvious claim 50.

Claim 50 is directed to an electroluminescent device including a wettability changing layer. Kimura discloses a photocatalyst layer having surface attributes (e.g., adhesiveness and oil decomposing properties) that can be changed by applying light energy. *See, e.g.*, Table 9. However, nowhere does Kimura teach or suggest an electroluminescent device including a wettability changing layer. Moreover, the wettability changing layer of claim 50 is capable of charge-injection and/or charge-transfer. There is no teaching or suggestion in Kimura that the disclosed photocatalyst layer is capable of charge-injection and/or charge-transfer. This capability is a property of the electroluminescent device of claim 50, and not merely an intended use, as asserted in the Office Action. As such, the capability of charge-injection and/or charge-transfer of the wettability changing layer distinguishes the layer over devices including layers that do not have such charge-injection and/or charge-transfer properties.

The photocatalyst layer of Kimura is disclosed as being useful in antifouling, cleaning water, deodorization, pasteurization, treatment of waste water, etc. *See, e.g.*, column 1, lines

6 to 10. Regardless of the particular attributes of the photocatalyst layer of Kimura, there is no teaching or suggestion in Kimura that such a layer would be useful or applicable in an electroluminescent device -- the applications in Kimura are not analogous to the applications of the instant invention. Accordingly, one of ordinary skill in the art would not have been motivated to use the photocatalyst layer of Kimura in an electroluminescent device.

The electroluminescent device of claim 50, because it includes a wettability changing layer, can be patterned using light energy. Once patterned, a further material can be formed pattern-wise on the wettability layer. These features permit manufacture of an electroluminescent device without employing expensive and complicated synthetic processes such as photolithography. Accordingly, the instant inventors unexpectedly discovered that an electroluminescent device including a wettability changing layer can be more simply and inexpensively manufactured than conventional electroluminescent devices. The disclosure of Kimura does not relate to electroluminescent devices, and thus Kimura does not recognize the problems associated with manufacture of electroluminescent devices or the novel, non-obvious solutions embodied in the electroluminescent device of claim 50.

Claim 50 is not anticipated by Kimura. Claims 51-55 depend from claim 50 and, thus, also are not anticipated by Kimura. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

B. Murasawa

The Office Action rejects claims 50-52, 54-58 and 60-63 under 35 U.S.C. §102(b) over EP 0 663 064 to Murasawa et al. ("Murasawa"). Claim 62 is cancelled, rendering the rejection moot as to that claim. As to the remaining claims, Applicants respectfully traverse the rejection.

Claim 50 is set forth above. The Office Action asserts that Murasawa discloses a wettability changing layer including a photocatalyst. Notwithstanding this assertion, Murasawa does not anticipate and would not have rendered obvious claim 50.

Murasawa discloses a photocatalyst composite that is capable of decomposing various pollutants when irradiated with light. *See, e.g.*, Tables 3 and 4. However, nowhere does Murasawa teach or suggest an electroluminescent device including a wettability changing layer. Also, there is no teaching or suggestion in Murasawa that the disclosed photocatalyst composite is capable of charge-injection and/or charge-transfer. Moreover, there is no suggestion to apply the photocatalyst composite of Murasawa to an electroluminescent device. That is, there is no teaching or suggestion in Murasawa that such a photocatalyst composite would be useful or applicable in an electroluminescent device -- the applications for the photocatalyst composite of Murasawa (e.g., purification, sterilization, etc.) are not analogous to the applications of the instant invention. Accordingly, Murasawa, like Kimura, fails to teach or suggest each and every feature of claim 50.

Claim 50 is not anticipated by Murasawa. Claims 51-52, 54-58, 60, 61 and 63 depend from claim 50 and, thus, also are not anticipated by Murasawa. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

C. Kobayashi

The Office Action rejects claims 50-55, 64 and 65 under 35 U.S.C. §102(b) over U.S. Patent No. 6,294,313 to Kobayashi et al. ("Kobayashi"). Claim 64 is cancelled, rendering the rejection moot as to that claim. As to the remaining claims, Applicants respectfully traverse the rejection.

Claim 50 is set forth above. The Office Action asserts that Kobayashi discloses a wettability changing layer including a photocatalyst and a charge facilitator. Notwithstanding this assertion, Kobayashi does not anticipate and would not have rendered obvious claim 50.

Kobayashi discloses a photocatalyst-containing layer that is suitable for use in a structure for pattern formation, a color filter, a lens or a lithography plate. *See, generally*, columns 5 to 10. However, nowhere does Kobayashi teach or suggest an electroluminescent device including a wettability changing layer. Also, there is no suggestion to apply the photocatalyst-containing layer of Kobayashi to an electroluminescent device. Specifically, there is no teaching or suggestion in Kobayashi that such a photocatalyst-containing layer would be useful or applicable in an electroluminescent device -- the applications for the photocatalyst-containing layer of Kobayashi are not analogous to the applications of the instant invention. Accordingly, Kobayashi, like Kimura and Murasawa, fails to teach or suggest each and every feature of claim 50.

Claim 50 is not anticipated by Kobayashi. Claims 51-55 and 65 depend from claim 50 and, thus, also are not anticipated by Kobayashi. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Rejection Under 35 U.S.C. §103

The Office Action rejects claims 56-63 under 35 U.S.C. §103(a) over Kobayashi in view of Murasawa. Claim 62 is cancelled, rendering the rejection moot as to that claim. As to the remaining claims, Applicants respectfully traverse the rejection.

As discussed above, none of Kimura, Murasawa and Kobayashi teaches or suggests an electroluminescent device including a wettability changing layer. As each of the references is deficient in this regard, no combination of the references can teach or suggest each and every feature of claim 50.


Claim 50 would not have been rendered obvious by Kobayashi and Murasawa. Claims 56-61 and 63 depend from claim 50 and, thus, also would not have been rendered obvious by Kobayashi and Murasawa. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 50-61, 63 and 65-67 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,


James A. Oliff
Registration No. 27,075

Jacob A. Doughty
Registration No. 46,671

JAO:JAD/hs

Attachments:
Terminal Disclaimer (2)

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OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

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